REMARKS/ARGUMENTS

Applicant would like to thank the Examiner for the thorough review of the present application. Based upon the amendments and the following remarks, Applicants respectfully request reconsideration of the present application and allowance of the pending claims.

The Present Invention

The present invention comprises a method and apparatus for implementing location-based identification in a communication network. The method for implementing location-based identification in a communication network includes establishing a network connection between a host and a network, transmitting data packets from the host through a location-specific connection port and identifying the port at an access concentrator in the form of a port identifier. The port identifier is then communicated to a network device, typically a gateway device, and stored in a database in communication with the network device. The method may include tagging the network packets at the access concentrator with a port identifier that corresponds to a media access control (MAC) address. The access concentrator and the network device will tag and communicate port numbers by assigning VLAN (Virtual Local Area Network) identifiers to the ports.

35 U.S.C. § 102 (e) Rejections

Claims 1, 3, 7, 12-15 and 17-23 stand rejected under 35 U.S.C. 102 (e) as being anticipated by United States Patent No. 6,058,429 issued to Ames et al. (the '429 Ames patent).

According to the Office Action, the '429 Ames patent teaches a network device capable of providing location-based identification to network subscribers, comprising:

a processor (**learning switch 200**) that communicates with an access concentrator (**local switch 134, 136 or 138**) to determine connection ports of host-generated (local clients or servers) data packets; (**Column 3, lines 19-27, lines 49-55**) and

a database (learning switch) that stores the connection port for the purpose of identifying connection ports within a network that have been granted network authorization. (**Column 3, lines 19-27; column 11, lines 42-44**).

Additionally, the Office Action states that the '429 Ames patent teaches the further limitations of dependent claims 3 and 17, specifically:

The processor uses VLAN protocol as a communication link between the processor and the access concentrator. (**Column 4, lines 52-56; Figure 2, elements 102, 110 or 118**)

The network device further comprises a gateway device that provides subscribers network access. (**Figure 2, element 126**)

The '429 Ames Patent Does Not Teach or Suggest the Identification of the Connection Port of Multiple Hosts at the Access Concentrator

The '429 Ames patent teaches the assignment of only one host per access concentrator (i.e., switches 134, 136 and 138). In this regard, the '429 Ames patent, see Figure 2 and related discussion beginning at Column 4, line 52 – Column 5, line 37, the access concentrators can only assign one port identifier (VLAN tags 102, 110 and 118). Thus, switch 134 can assign VLAN tag 102 to the location port of server 104, client 106 or client 108. However, switch 134 is not capable of assigning multiple VLAN tags, one each to server 102, client 106 and client 108.

The present invention and, more specifically, amended independent Claims 1 and 7 require that the access concentrator be capable of assigning port identifiers (i.e., unique VLAN tags or the like) for each host that is accessing the network through the access concentrator. Amended Claim 1 requires that "a processor that communicates with an access concentrator to

receive one or more port identifiers assigned by the access concentrator and *each port identifier is associated with a location-specific connection port of one or more hosts*." (italics added). Amended Claim7 require that the access concentrator identify "the location-specific, connection port of *each of the hosts by assigning a port identifier* that is mapped to the location of the connection port" (italics added).

For this reason, we believe that Claims 1 and 7 and all dependents that depend there from, which add further limitations, are, as amended distinguishable from the '429 Ames patent and, therefore, patentable.

The '429 Ames Patent Does Not or Suggest a Simplified Network Approach that Eliminates Multiple Access Concentrator Switches

As discussed above the '429 Ames patent teaches a network system that requires multiple access control switches (134, 136 and 138). Multiple access concentrators are required by the Ames teachings because each switch is capable of assigning only one port identifier.

The present invention provides for a more simplified approach, in that, only one access concentrator is required that applies a unique port identifier (i.e., VLAN tag or the like) to the connection port of each host accessing the network.

Additionally, the '429 Ames patent requires Layer 3 (network layer) switching and access to the destination and source network layer address to route data packets between the switches. This is because the '429 Ames requires multiple switches.

In the present invention, because the access concentrator is capable of assigning a unique port identifier (i.e., VLAN tag or the like) to each port associated with a network-accessing host the network gateway device is able to track the location of any type of packet, even if there is no Layer 3 address, as required with some networking protocols.

For this reason, we believe that Claims 1 and 7 and all dependents that depend there from, which add further limitations, are, as amended distinguishable from the '429 Ames patent and, therefore, patentable.

The '429 Ames Patent Does Not Teach How the Network Gateway Device Uses the Port-Identifying Information to Determine the Network Authorization of the Port or to Rely on This Information to Execute an Ancillary Network Application

The '429 Ames patent provides no teaching as how the gateway would use the port-identifying information to determine network authorization or to otherwise use the port-identifying information in conjunction with another network application.

Claims 1 and 7, as amended, require that the port-identifying information be used by the gateway device to determine if hosts have been network granted authorization. The present invention does this by mapping the MAC address of the hosts to the port associated with the port identifier.

Claim 18, as amended, requires applying results of the identification to a network system application.

Thus for reasons stated above, independent claims 1, 7, 18 and the dependent claims that added further limitations, are distinguishable from the teachings of the '429 Ames patent and, thus are patentable.

35 U.S.C. § 103 (a) Rejections

The '429 Ames Patent in view of the '142 Pitcher patent

Claims 2, 8-11 and 16 stand rejected under 35 U.S.C. 103 (a) as being unpatentable over United States Patent No. 6,058,429 issued to Ames et al. (the '429 Ames patent) in view of United States Patent No. 6,370,142 issued to Pitcher et al. (the '142 Pitcher patent).

According to the Office Action, the '429 Ames patent fails to teach the limitations of dependent Claims 2, 8 and 9, however; the Examiner believes that the '142 Pitcher patent teaches such, specifically:

The processor reads an identifier within a tagged portion of the data packet to determine connection ports of host generated data packets. (**Column 13, lines 49-58; Column 14, lines 10-20**).

The Examiner states that it would have been obvious at the time of the invention to combine the teachings of Pitcher with the teachings of Ames to conserve additional bandwidth by eliminating the exposure of uninterested traffic to certain stations (**Pitcher, Column 3, lines 43-46**).

The '142 Pitcher Patent Teaches DTAG for the Purpose of Pruning MultiCast Traffic and Does Not Provide a Teaching of DTAG for the Purpose of Identifying the Location of a Host at a Gateway Device.

The '142 Pitcher patent provides a teaching of Dtagging for the purpose of pruning (i.e., reducing the use of) multi-cast traffic to each host within a network. The '142 Pitcher patent does not provide a teaching nor suggest the use of Dtagging for the purpose of identifying, at a gateway device, the location of the host.

Claims 8 and 9 require that the processor read an identifier (i.e., DTAG or the like) to determine connection ports of host generated packets.

Therefore we are of the opinion that Claims 8 and 9 are patentably distinct and are non-obvious in view of the teachings of the '142 Pitcher patent and the primary reference, the '429 Ames patent.

The '429 Ames Patent in view of the '422 Hunt Patent

Claims 4-6 stand rejected under 35 U.S.C. 103 (a) as being unpatentable over United States Patent No. 6,058,429 issued to Ames et al. (the '429 Ames patent) in view of United States Patent No. 6,539,422 issued to Hunt et al. (the '422 Hunt patent).

According to the Office Action, the '429 Ames patent fails to teach the limitations of dependent Claims 4, 5 and 6, however; the Examiner believes that the '422 Hunt patent teaches such, specifically:

The processor further comprises a querying agent capable of requesting identification data related to the connection port of host-generated data packets. (**Abstract; Column 5, lines 46-52; Column 15, lines 57-63; Figure 2, elements 211-212 and Figure 9A, elements 905-906**)

The querying agent uses Simple Network Management Protocol (SNMP) as the communication link between the network device and the access concentrator. (**Abstract; Column 5, lines 46-52; Column 15, lines 57-63; Figure 2, elements 211-212 and Figure 9A, elements 905-906**)

The querying agent uses Extensible Markup Language (XML) as the communication link between the network device and the access concentrator. (**Abstract; Column 15, lines 39-43; Figure 2, element 231**)

The Examiner states that it would have been obvious at the time of the invention to combine the teachings of Hunt with the teachings of Ames to actively check the status of the network by monitoring various devices on the network (hubs, routers, bridges, etc). Furthermore, the SNMP protocol allows the network administrator to manage and be notified in case of a problem in the network.

The '422 Hunt patent Does Not Teach or Suggest How to Use Querying Agent and specifically, SNMP protocol, XML to Identify the Location of a Host

The '422 Hunt patent is a system for controlling hand-held devices. The present invention provides for determination of the location of a host from within an access network and requires no such data collection interface in the host. The '422 Hunt patent teaches the use of SNMP to collect network information for a completely different purpose than the present invention.

Therefore, we are of the opinion that Claims 4-6 are patentably distinct and are non-obvious in view of the teachings of the '422 Hunt patent and the primary reference, the '429 Ames patent.

As such, applicant respectfully submits that all of the independent claims, which have been rejected under 35 U.S.C. § 102 (e), as well as the dependent claims that depend there from and have been rejected under either 35 U.S.C. § 102 (e) or 35 U.S.C § 103 (b), are not obvious by legal standards and, are thus, patentable.

Conclusion

In view of the proposed amended claims and the remarks submitted above, it is respectfully submitted that the present claims are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicant's undersigned attorney to resolve any remaining issues in order to expedite examination of the present invention.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,
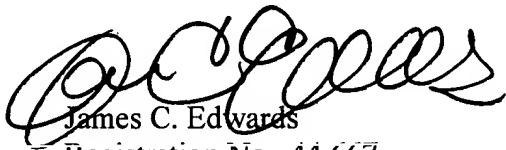
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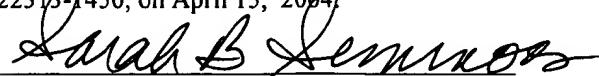
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